



U.S. Army

Transition to Digital Operations



Steve French
frenchs@sarda.army.
mil

"Soldiers Are Our Customers"





Outline



- **Review**
 - Key points from March 99 brief
- **Architecture**
- **Metrics**

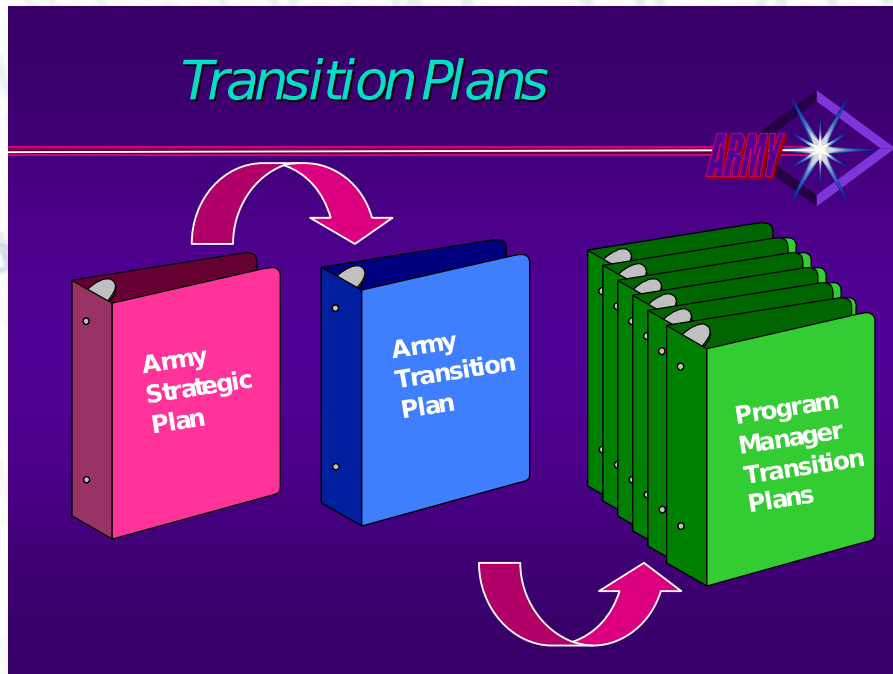


"Soldiers Are Our Customers"





IDE Planning



- **Army Strategic Plan (Complete)**
 - Army level metrics
- **Army Transition Plan (Complete)**
 - Management Structure
 - Reporting requirement
 - Top level requirements
- **PM Transition Plans (Complete)**
 - PM planning requirements
 - System Architecture
 - Schedule, budget

Goal is to have a “Managed Transition”

“Soldiers Are Our Customers”

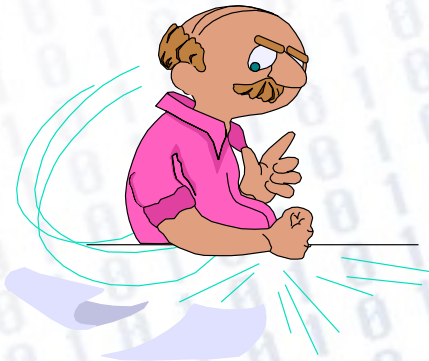
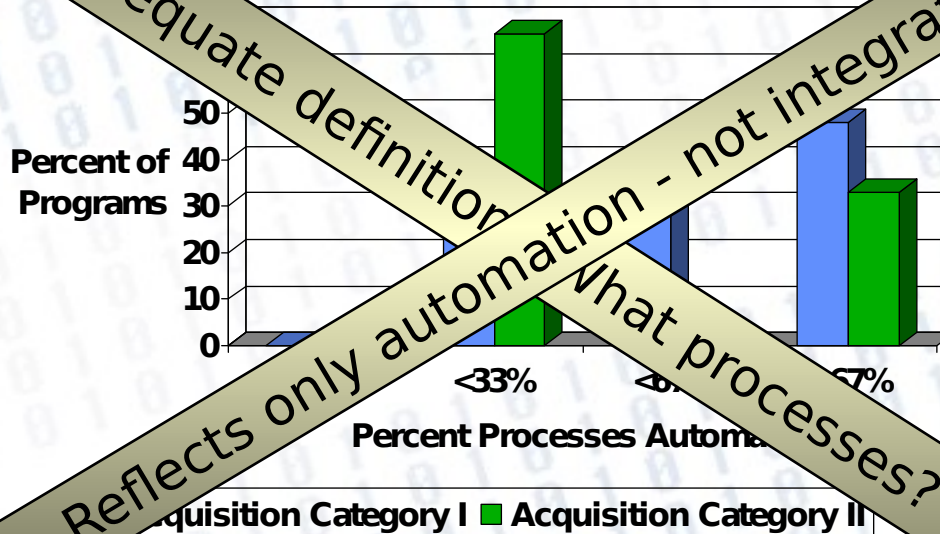




Status of Army Programs



- Inadequate definition
- Reflects only automation - not integration
- What processes? What data?



Don't come back next time without metrics that show:

1. Where you are.
2. Where you are going.
3. Progress over time.

"Soldiers Are Our Customers"





Building the Metric



The key to building a useful metric is to link it to the actions that are necessary to achieve success.



The activities that make up Program Management provide the building blocks for this understanding.



Re-engineering these blocks through an operational architecture provides a change process that can be managed and measured.



"Soldiers Are Our Customers"





Steps to Achieve Digital Operations



- 1. Establish high level functions**
- 2. Decompose into sub-functions**
- 3. Identify key activities**
- 4. Create “as-is” architecture:**
 - identify the data associated with each activity
 - identify the contributors to, users of & participants in each activity
 - identify common data among activities & data flow between activities
- 5. Reengineer into “to-be” architecture:**
 - Explore opportunities for improvement
 - Reengineer data, participants, processes
 - Establish target IDE
- 6. Prioritize / Allocate Resources / Implement**

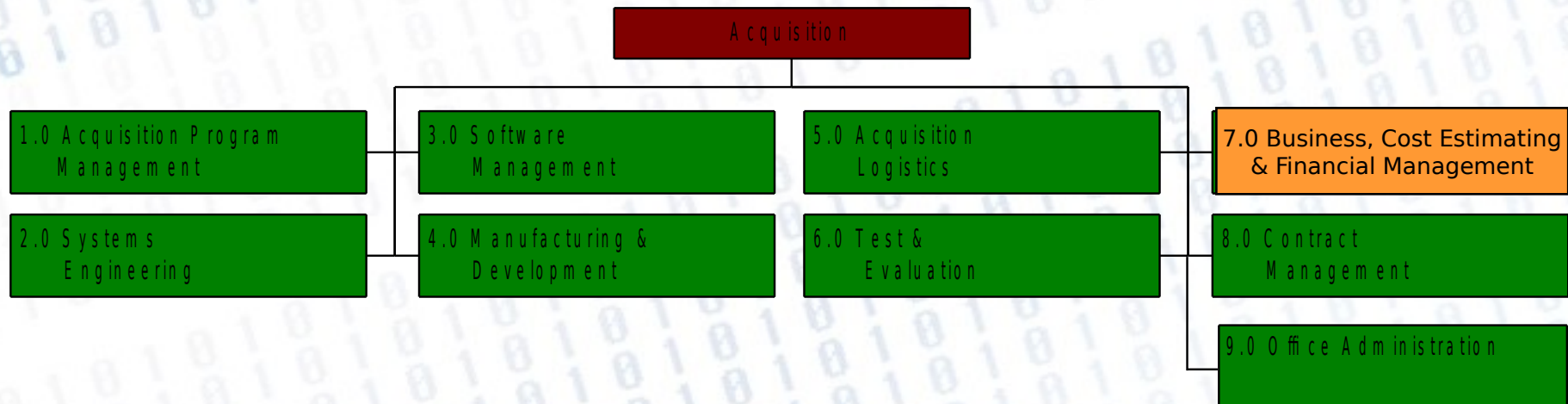


“Soldiers Are Our Customers”





1. Establish High Level Functions

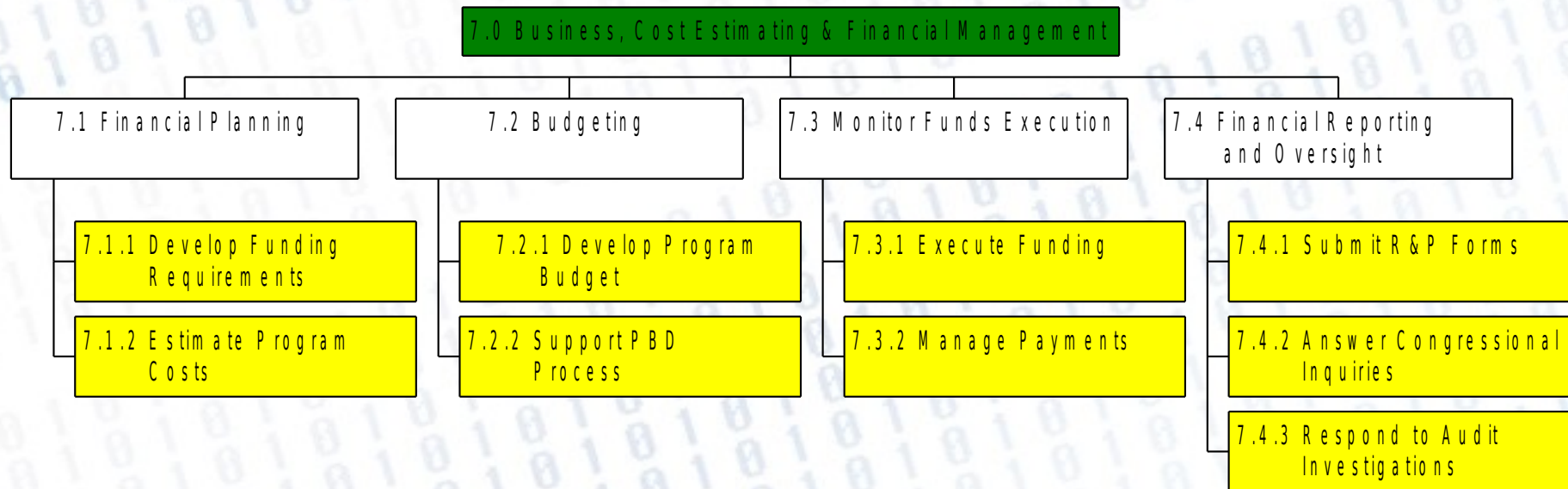


"Soldiers Are Our Customers"





2. Decompose into Sub-Functions (Level 3)

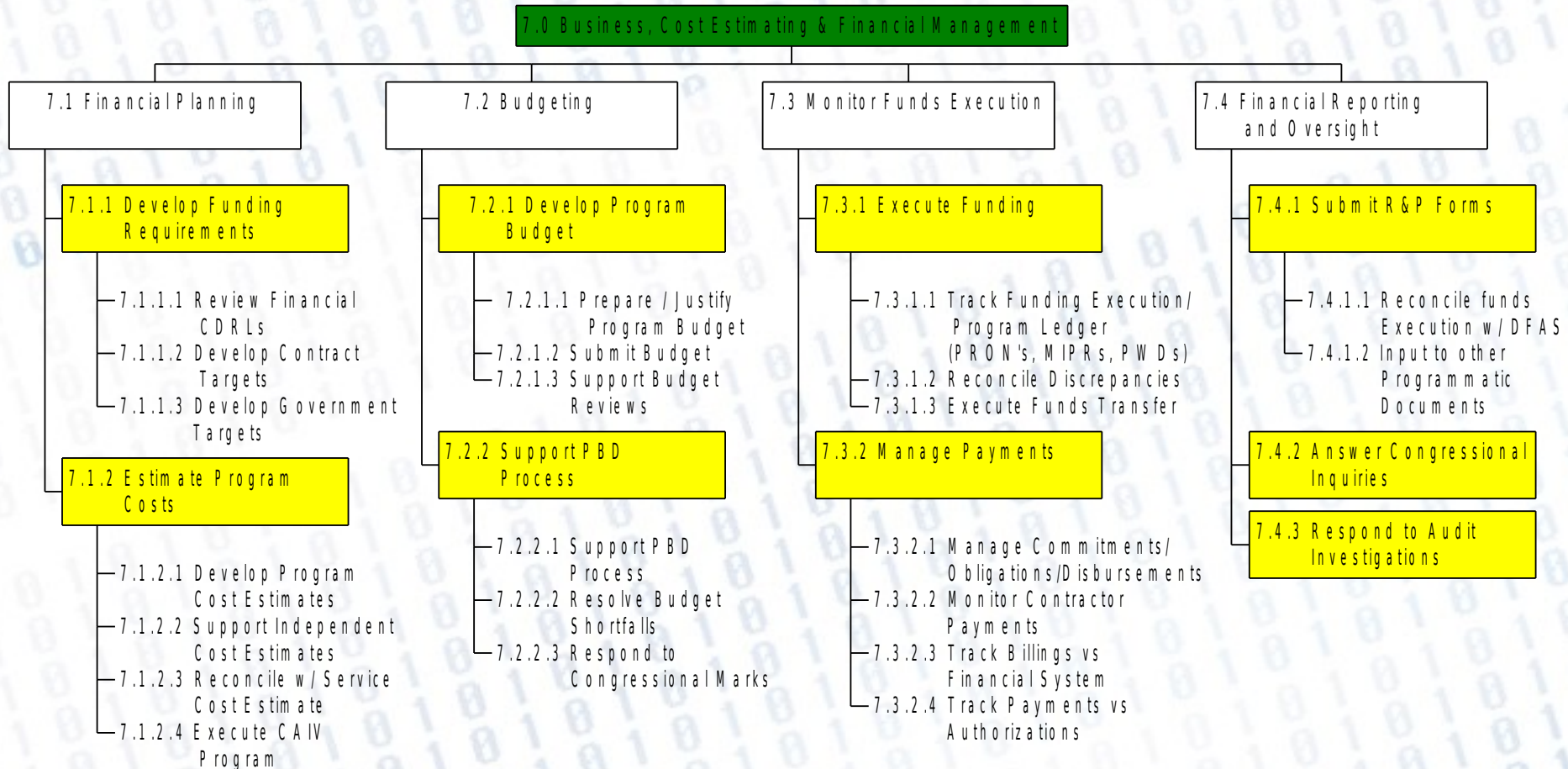


"Soldiers Are Our Customers"



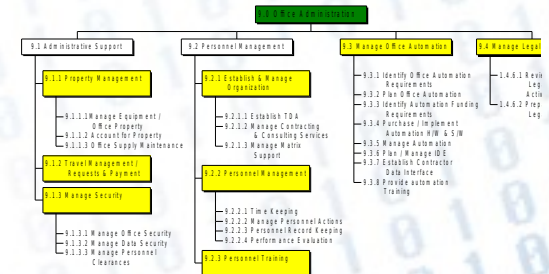
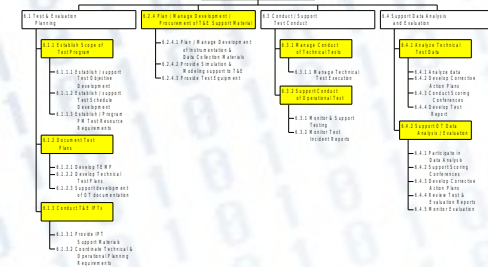
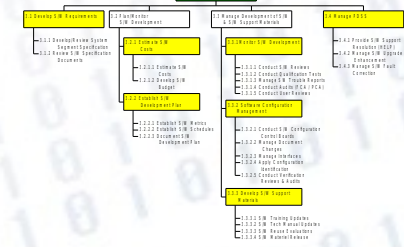


3. Identify Key Activities



"Soldiers Are Our Customers"



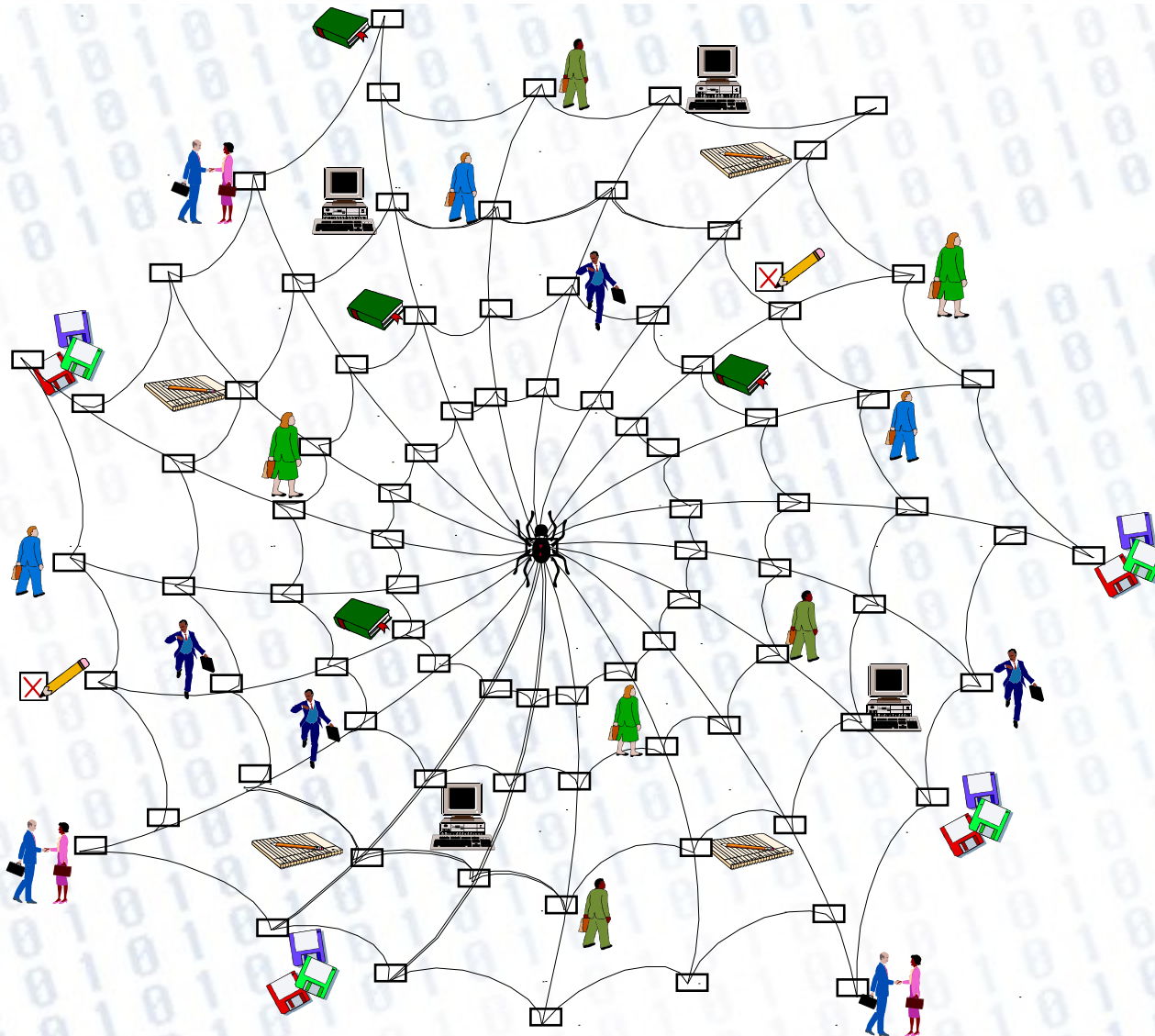


“Soldiers Are Our Customers”





4. Create “as-is” Architecture

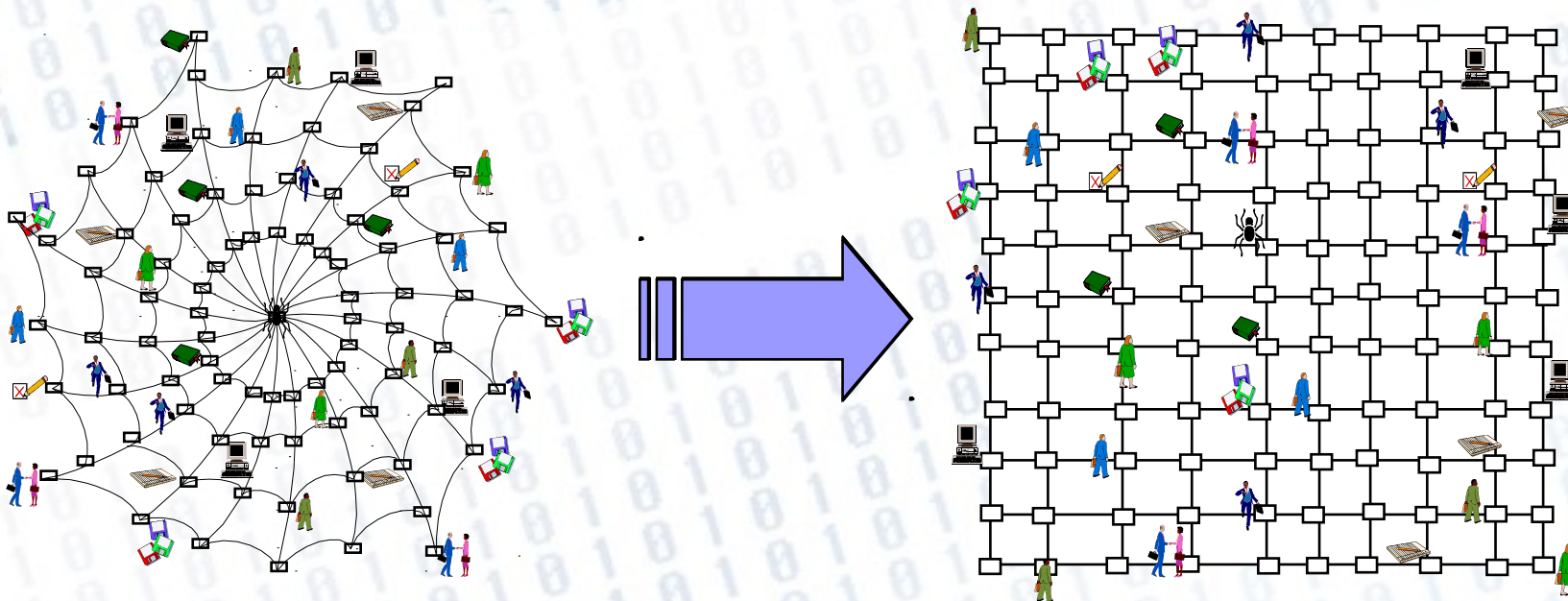


“Soldiers Are Our Customers”





5. Reengineer into “to-be” Architecture



“Soldiers Are Our Customers”





6. Prioritize / Allocate Resources / Implement



Army Use of Operational Architecture

- **Army Transition Plan update to incorporate Architecture Framework**
- **PMs Transition Plans to reflect transition from “as- is” to “to- be” Architecture**
- **PEOs / DSAs to manage transition**
 - **Prioritize Process Reengineering & Automation Investments**
 - **Measure & Report progress**
- **Advertise successes / best practices to encourage others**

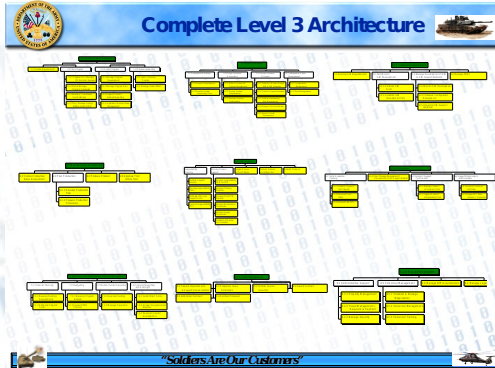


“Soldiers Are Our Customers”





Proposed Metric



$$M = (\sum C_i W_i / \sum O_i W_i)$$

where

C_i = current state of i^{th} activity

O_i = objective state of i^{th} activity

W_i = weight of i^{th} activity

"Soldiers Are Our Customers"





Process Maturity Levels



Level 4

Fully Integrated Digital Processes

Data / documents electronic w/ network access from inside & outside the organization. Collaborative web tools / workflow tools used to facilitate use & development of data / documents. Network software tools provide remote users full utility of the data / documents accessed - including legacy data. Processes reengineered to take advantage of automation.

Level

3

Shared Digital Processes

Data / documents electronic & accessible via network from both inside and outside the organization. Network access is controlled but authorization is routine & timely when justified. Processes reviewed & some reengineered. Little integration of data used in multiple processes. Legacy data on the network but the applications that provide functionality are not.

Level 2

Automated Digital Processes

Data &/or documents are electronic but not accessible via network. Sharing limited to email or similar vehicles. There is no network sharing, collaboration or integration of data or documents. Few processes reengineered.

Level 1

Paper Processes

Little automation exists. Data and/or documents may be electronic but they are not accessible via network or typically shared via E-Mail. Relevant processes are essentially paper-based.

"Soldiers Are Our Customers"





Metric Methodology



- **Use Architecture Framework**
- **PMs tailor Framework**
 - **Eliminate processes**
 - ... not relevant to program
 - ... not within timeframe of plan
 - **Add / tailor process definition**
- **Grade processes using defined “levels of automation”**
 - **For current (C_i) and objective (O_i) states**
- **Improve metric with process weights ($W_i = .2, .4, .6, .8, 1.0$)**
 - **based on amount of data, complexity or extent of use**
- **Calculate Metric using $M = (\sum C_i W_i / \sum O_i W_i)$**
 - **sums are over the “i” processes relevant to each program office**





Example Metric



- PM w/ 5 processes:
 - Processes a, b, c, d and e
- Tailor Framework:
 - Process d is not relevant so it is eliminated.
- Grade processes:
 - Current state (C_i) of process a as 1, process b as 3, process c as 2 & process e as 3.
 - Objective state (O_i) of process a as 2, process b as 3, process c as 4 & process e as 4.
- Add weights:
 - Processes assessed with weights $a=0.2$, $b=0.2$, $c=0.6$, $e=1.0$
- Calculate metric:
 - **$M = (\sum C_i W_i / \sum O_i W_i)$**
 - $M = (1*(.2)+3*(.2)+2*(.6)+3*(1.0)) / (2*(.2)+3*(.2)+4*(.6)+4*(1.0)) = 0.676.$
 - The objective is to achieve a 1.0 by the end of 2002.
 - Ave **O_i** indicates target IDE maturity $(2+3+4+4)/4 = 3.25$





Next steps



- **Tri-Service Acceptance of Architecture Framework / Metric**
- **Next step is Pilot on a few programs**
 - **Objective is to validate:**
 - ... that it can be executed
 - ... that it can materially contribute to transition progress
 - ... that it can promote identification & transfer of best practices
- **Final step is full implementation**
 - **Objective is comprehensive data call by end of calendar year**



"Soldiers Are Our Customers"





Army Performance Metrics



- **Count of IDEs that fully meet functional requirements**
- **Number of planned / ongoing / completed Business Process Reengineering efforts**
- **Reductions in:**
 - **Process cycle times**
 - **Manpower**
 - **Business costs**
- **Percent reduction in paper based activities**
- **Funding expenditures**



"Soldiers Are Our Customers"





Conclusions



- **Management mechanisms are in place**
 - **Plans, IPTs, Decision Authorities**
 - **Architecture**
 - **to understand data exchange / data access / data management requirements**
 - **Metric**
 - **basis for measurement & management of progress**
- **Appropriate progress is being made**

Questions ???



"Soldiers Are Our Customers"

